

## Research Article

### Self-Determination in Social Context: A Social Cognitive Approach

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**Abstract:** There is growing support for situating understandings of self-determination for students with disabilities in social and cultural contexts. However, exploration and expansion of theory is needed to illuminate the complexities of self-determination in the process of academic and career development, particularly for students from culturally diverse backgrounds. In an attempt to create this understanding we propose the use of social cognitive career theory because this theory of career and academic development accounts for both personal background and identity variables (e.g., disability, gender, and culture) and intrapersonal cognitive variables (e.g., coping-efficacy, self-efficacy) (Lent, Brown, & Hackett, 1994). Whereas self-determination theory in special education is primarily concerned with cognitive variables.

**Keywords:** Culture, Self-Determination, Transition

Students with high-incidence disabilities (HID) represent the largest group of individuals with disabilities in K-12 U.S. public schools. Recent data suggest that this group makes up between 70% and 89% of all students in special education (U.S. Department of Education, 2015). Historically the research literature in special education has defined HID as being comprised of students who have been identified with learning disabilities (LD), emotional and/or behavioral disorders (E/BD), and mild intellectual disabilities (MID) (Hallahan & Kauffman, 1977; Saborine, Cullinan, Osborne, & Brock, 2005; Sabornie, Evans, & Cullinan, 2006). The growth in recent years of the number of students identified with high-functioning autism, attention deficit hyperactivity disorder, (often covered under the other health impairment category), and speech and language impairments has led some researchers to expand the HID grouping to include these impairments (Gage, Lierheimer, & Goran, 2012). Beginning in the late 1970's researchers asserted that differences within HID were not meaningful grounds for instruction based on disability category and educational placement (Hallahan & Kauffman, 1977). There is controversy concerning the educational support of this population as a homogenous group of learners (Fuchs, Fuchs, & Stecker, 2010). However, evidence suggests that although differences in cognitive, academic, and behavioral performance exist within HID, academic and social development can be supported by a noncategorical approach to special education (Gage et al, 2012). This approach emphasizes academic and social inclusion and specially designed instruction in least restrictive environments based on individual student need rather than on administrative disability labels (Gage et al, 2012). This means that although students are still identified under

one of the 13 IDEA categories, depending on state policy and school culture they may receive services in a non-categorical or cross-categorical manner

Issues of overrepresentation and misidentification are unfortunately part and parcel of HID, particularly for students with LD, MID, and E/BD (Donovan & Cross, 2002). This raises serious concerns regarding long-standing systemic bias in general and special education. Research demonstrates that children and youth from lower socioeconomic backgrounds, those of color, males, and English language learners are overrepresented in the HID group (Sullivan & Bal, 2013; Sullivan, 2011). Said differently, some children and youth because of their gender, socioeconomic status and or cultural and linguistic background are labeled with HID not because of impairments that they are born with but rather because of cultural bias within the educational system (Artiles, Kozleski, Trent, Osher, & Ortiz, 2010). Impairments associated with HID are part of the lived experience of some learners from culturally and linguistically diverse backgrounds; however far greater numbers of these students are identified with HID than is otherwise reasonable to expect in the population because of the subjective/ judgmental nature of student's learning difficulties (Kilinger et al., 2005). Placed in the context of school-to-community transition issues of overrepresentation and student self-determination become significant due to the strong potential for marginalization and diminished long-term adult outcomes.

Situating theoretical and practical understandings of self-determination for students with HID from CLD backgrounds in social context is necessary for bringing to light the multifaceted process of academic and career development during the transition from school-to-community. This study engages a social cognitive approach and explores and expands theoretical understandings of self-determination in social context. In this study we conceptualize self-determination in alignment with the work of Saleebby (2014) and define self-determination as the promotion of rights, empowerment and social justice for individuals with disabilities in social context. The social cognitive approach theorizes that the combination of the social environment (e.g., discrimination in the labor market) and individual cognitive variables (e.g. perception of barriers to employment and coping efficacy) influence career and academic development.

## **Literature Review**

### **Special Education Placements and Prevalence**

60% of students with disabilities in the U.S. spend 80% or more of the school day in the general education classrooms. Receiving the majority of their education in the general education curriculum (U.S. Department of Education, National Center for Education Statistics, 2016). Students with HID spend the greatest proportion of their school day inside general classes when compared to peers with other types of disability (U.S. Department of Education, National Center for Education Statistics, 2016). Examining national trends in special education placement from 1990-2007, McLeskey, Landers, Williamson, and Hoppey

(2012) found significantly greater numbers of students with HID being included in general education settings while at the same time their placements in more restrictive placements (e.g. pullout, separate class or separate school) diminished. The work of McLeskey et al. (2012) shows that when compared to elementary students, secondary students experience greater changes in placements toward more inclusive learning environments. However, even though progress toward more inclusive learning environments has been made in general, secondary students still experience more restrictive placements than their elementary counterparts (McLeskey et al., 2012).

Although largely included in general education classes, it is also apparent that students with HID encounter both academic and social-emotional barriers to school success. For example, students with HID encounter learning difficulties that lead to diminished longitudinal growth in core academic areas (e.g. reading and mathematics) (Wei, Lenz, & Blackorby, 2012; Wei, Blackorby, & Schiller, 2011). In addition, some students with HID experience emotional and behavioral difficulties that result in negative peer and student teacher relationships (Murray & Pianta, 2007; Murray & Greenburg, 2006). The barriers to academic learning and social-emotional adjustment encountered by these students should not be attributed primarily to deficit understandings of student ability. Rather, these challenges should be placed in social and political context and the complex interactions between the person, environmental affordances, and behavior should be accounted for so that broader understandings of disability and educational outcomes are possible (Baglieri, Valle, Connor, & Gallagher, 2010). These considerations should carefully include treatment of social class, language, and student culture.

### **Post-School Employment and Higher Education Outcomes**

Labor market participation and success means more than just getting a job. Students with disabilities, and particularly those from CLD backgrounds in the transition from school-to-community are marginally positioned in academic, economic, and social opportunity structures (Trainor, Lindstrom, Simon-Burroughs, Martin, & Sorrells, 2008). This marginalization of students with disabilities occurs at the intersection of power, social class, race, and gender (Liasidou, 2013), and results in material deprivation, socio-political exclusion, and disempowerment (Gleeson, 2004; Liasidou, 2013). The post-school attainments of students with disabilities reflect barriers to full inclusion in academic, economic, and social opportunity structures for people with disabilities (Lindstrom, Kahn, & Lindsey, 2013).

To provide maximal access to long-term economic and social wellbeing for students with disabilities employment must provide living wages and a career development pathway (Lindstrom et al., 2013). The employment outcomes experienced by youth with HID suggest that although they are getting a start, the type of start that they are getting may compromise long-term economic stability and career advancement (Morningstar, Trainor, & Murray, 2015; Rowjewski, Lee & Gregg, 2014). The most frequently held jobs after exit from school for

youth with HID are those in the service industry in low-level positions (Morningstar et al., 2015). In these positions only half (50.2%) receive paid leave, few have employer provided health insurance (44%), and only one-third (33.8%) receive retirement benefits (Morningstar et al., 2015). Examining the employment outcomes of youth with and without HID two years following school completion, Rojewski et al. (2014) found that students with disabilities were less likely to be employed and less likely to be working full-time when compared to their non-disabled peers. The lack of opportunity for well paid employment with the potential for advancement adversely impacts students with disabilities from CLD backgrounds (Fabian, 2007). Barriers in the opportunity structure of the labor market such as discrimination and lack of experience create impediments to early career development for students with disabilities (Lindstrom et al., 2013). Further these issues are exacerbated by limited aspirations and barriers to higher education and training (Lindstrom et al., 2013).

Higher education confers a host of economic and social benefits that increase access to opportunity structures within society (Oreopoulos & Petronijevic, 2013). Continued academic development via higher education is a post-school pathway that is taken by few students with disabilities (Lindstrom et al., 2013). Studying a nationally representative sample, Morningstar et al. (2015) reported that in the first two-to-five years following high school less than half (47.5%) of youth with HID had ever attended higher education. Those who had attended postsecondary education chose to do so at 2-year or community colleges (37.6%) and professional/technical schools (29.3%). Fewer than 15% of youth with HID attend 4-year college or university (Morningstar et al., 2015).

### **Transition Planning**

Meaningful transition plans create the foundation for transition education and in part establish the trajectory for post-school outcomes for youth with disabilities (Halpern, 1994; Trainor, Morningstar, & Murray, 2015). Federal Indicator 13 (I-13) establishes minimum transition planning requirements under IDEA (National Technical Assistance Center on Transition [NTACT], 2016). According to I-13 transition plans must identify appropriate post-school goals that are updated annually in the areas of education, employment, and when necessary independent living. Evidence that post-school goals are based on an age appropriate transition assessment and that transition services in the IEP will reasonably enable a student to meet their goals is also required. In alignment with assessment and transition services, I-13 also requires that a course of study be identified so that students may be better able to meet their post-school goals. Next, the transition plan must include IEP goals that are aligned with transition service needs. Evidence must be provided that students have been invited to engage in the transition planning process, and when appropriate community based agencies (e.g., vocational rehabilitation) are also to be invited to participate (NTACT, 2016). The extent to which transition plans are constructed to meet these requirements varies widely with some schools and districts creating plans that adhere to federal policy guidelines and others are working toward improved implementation (Landmark & Zhang, 2012).

## Self-Determination

Transition plans can meet federal compliance mandates and still fall short of supporting students in the transition process particularly if plans are created for students instead of by them and with them and their families (Cobb & Alwell, 2009; deFur, 2003). The transition research literature suggests that self-determination beliefs and actions play an important role in shaping both transition planning experiences and post-school outcomes for students with disabilities (Test et al., 2009; Trainor, 2005). Self-determination has been defined as:

“... A combination of skills, knowledge, and beliefs that enable a person to engage in goal directed, self-regulated, autonomous behavior. An understanding of one’s strengths and limitations together with a belief in oneself as capable and effective are essential to self-determination. When acting on the basis of these skills and attitudes, individuals have greater ability to take control of their lives and assume the role of successful adults” (Field, Martin, Miller, Ward, & Wehmeyer, p. 2, 1998).

As part of the transition planning process and in alignment with federal planning requirements, student self-determination knowledge and skills are often assessed. The rationale for the assessment of student self-determination is that, if teachers and transition service providers can accurately identify a student’s strengths and areas of need in the area of self-determination through the use of an age appropriate transition assessment then they will be able to work with the student to formulate a transition plan that provides robust supports and services that are aligned with a student’s post-school goals. These assessments typically do not address the role that a student’s identity plays in the formation and enactment of self-determination nor do these measures assess how individuals view the social context in relation to the self in the process of academic and career development.

Although emerging evidence points to the importance of self-determination for students with HID (Test et al., 2009), this construct has also been critiqued for misaligning with the self-determination beliefs and actions of students from CLD backgrounds (Leake & Boone, 2007; Leake & Skouge, 2012; Saleeby, 2014). Critiques of self-determination recognize the importance of empowerment, rights, and agency for people with disabilities yet point out that the construct may not adequately encompass and agency expectations and actions of individuals from CLD backgrounds (Saleeby, 2014). According to Leake and Skouge (2012) the values of autonomy and independence that the concept of self-determination is grounded in are largely the values of American majority culture. This view of autonomy and individuality may misalign with conceptualizations of the self in interdependent relationships that are valued by some individuals from CLD backgrounds (Leake & Skouge, 2012). The dominant conceptualization of self-determination set forth by Field et al. (1998) in its current application is limited by not fully accounting for affordances made by social environments (Leake, 2012).

The challenge for both research and practice in the area of school-to-community transition is to build on the evidence that suggests that self-determination is an important factor in processes of academic and career development and expand conceptual understandings of the self in relation to others and the social environment so that research and educational practice is culturally responsive and socially contextualized.

In an attempt to create this understanding we propose the use of Social Cognitive Career Theory because this theory of career and academic development accounts for both personal background and identity variables (e.g., disability, gender, and culture) and intrapersonal cognitive variables (e.g., coping-efficacy, self-efficacy) (Lent, Brown, & Hackett, 1994). Whereas self-determination theory in special education is primarily concerned with cognitive variables.

### **Social Cognitive Career Theory**

The use of social cognitive career theory holds promise as a novel cross-disciplinary tool for research and practice for understanding academic and career development processes during transition from school to community for students with disabilities from CLD backgrounds. Social cognitive career theory (Lent et al., 1994) finds its roots in the field of vocational psychology and conceptualizes the process of career and academic development as the formation and enactment of self-efficacy beliefs and outcome expectations in reciprocal relation to personal background (e.g., ethnicity, disability, gender, socioeconomic status), behavior, and environmental affordances. Said differently, as agents, people both are shaped by and shape social environments and therein make career choices and act accordingly. In this way social cognitive career theory frames the process of career and academic development in a social constructivist manner (Lent et al., 1994). In doing so, the theory prioritizes the role that the interaction between the person and their environment play in shaping academic and career development processes and outcomes (Lent et al., 1994).

Research suggests that both perceived and objective barriers in the social environment inhibit academic and career development (Lent, Brown, & Hackett, 1999). Perceived barriers can include perceptions of opportunity in the job market and objective barrier can be created by factors such as lack of quality educational opportunities and lack of material support for continued education and training. Cognitive personal variables (e.g., coping-efficacy) moderate the extent to which barriers influence career related goals and choices (Lent, et al., 1999). For example, if a young adult with a disability who is also a person from a CLD background perceives that a potential employer will discriminate against them based on their identity(s), she may not apply for a given position. Therefore, the individual perceives that the barrier to employment is too great and does not believe that she can successfully overcome it. As a result she may choose a less advantageous option.

Evidence from the study of the relationship between perceived barriers and coping efficacy in the context of career and academic development among marginalized populations



suggests that individuals who perceive greater barriers to their career and academic development have corresponding lower levels of coping efficacy (Luzzo & McWhirter, 2001; McWhirter, 1997). However there has been limited application of social cognitive career theory study of how students with disabilities from CLD backgrounds perceive and cope with academic and career related barriers (Dutta et al., 2015).

The purpose of this study is to apply social cognitive career theory in the development of a measure of perceived barriers to academic and career development and associated levels of coping efficacy for transition age students with HID from CLD backgrounds. In so doing our aim is to expand theoretical conceptualizations of self-determination through the use of social cognitive career theory to better understand the academic and career related perceptions of students with HID from CLD backgrounds. Our research question is, “Is there an underlying theoretical structure that relates ethnicity, disability, perceived barriers, and coping efficacy in the process of academic and career development for students with HID from CLD backgrounds?”

## **Method**

### **Sample**

Seventy students participated in this study (male  $n = 59$ , female  $n = 11$ ). The mean age of participants was 19.2 years ( $SD = 1.0$ ). The vast majority (96%) of student in the study were from CLD backgrounds. When asked to indicate their own ethnicity, 44% chose Hispanic or Latino, 31% Black or African American, 4% white, 4% Asian, and 17% indicated multi-racial. All (100%) of the students were identified as having HID; 74% with Specific Learning Disabilities, 10% with Emotional or Behavioral Disabilities, 7% with Other Health Impairments, and 4% with an Autism Spectrum Disorder. Data was missing for 4% of students.

The sample was chosen purposefully from students with CLD backgrounds with HID who were enrolled in a school-to-community transition program for individuals ages 18 to 22 in a large urban school district in southern California. This study was reviewed and approved by the Institutional Review Board at San Diego State University. All participants signed informed consent documents prior to participation in the study. Students were asked to complete the study measure in a single sitting during individual meetings with their special education teacher. Accommodations were made for those individuals who struggled with reading. Specifically, teachers read the items on the measure aloud to students, when necessary.

### **Measurement**

This measure was developed in alignment with the social constructivist theoretical position of social cognitive career theory and was based on the work of Luzzo and McWhirter (2001). Luzzo and McWhirter (2001) sought to identify how individuals from marginalized

backgrounds perceived and coped with barriers to academic and career development. Given our interest in applying the measure with students from CLD background with HID, we elected to change several items on the original measure to make items more theoretically relevant. Specifically, we altered items within the barriers and coping scales to focus on disability rather than gender. Given that the measure was administered to sample of students predominantly from CLD backgrounds, we elected to retain items in the scales that addressed perceptions related to ethnic discrimination. The measure can be broadly divided into two groups of items, those pertaining to barriers to career and academic development, and those pertaining to coping efficacy (see Table 1 for a full listing of items) In addition, consistent with the work of Morningstar et al. (2015) we added an item to the scales that dealt with access to healthcare/insurance benefits.

### **Data Analysis**

Our purpose was to develop and refine an instrument to measure perceived barriers and levels of coping efficacy in the process of school-to-community transition for students from CLD background with HID. Thus, in this study we chose to conduct an exploratory factor analysis (EFA) to reveal the underlying theoretical structure of variables measure by the instrument. In addition to the EFA, reliabilities were calculated with the field standard Cronbach's Alpha for each dimension of the refined instrument and overall (Cronbach, 1951).

## **Results**

We first present descriptive statistics from the sample, then results from the exploratory factor analysis, and follow with the reporting of internal consistency reliability coefficients.

### **Descriptive Statistics**

In general, participants indicated a high level of agreement to items on the ten-item Barriers to Academic and Career Development scale ( $M = 3.6$ ,  $SD = 1.4$ ). Items were presented on a 5-point Likert scale from strongly agree (1) to strongly disagree (5). Higher scores on this scale indicate higher perceived barriers. Of particular note, on average students indicated they perceived, "people's attitudes about my disability are currently a barrier to my educational goals" ( $M = 4.0$ ,  $SD = 1.2$ ). In contrast, participants indicated a relatively moderate level of confidence on the 16-item Coping Efficacy Scale ( $M = 2.5$ ,  $SD = 1.5$ ). Items were presented on a 5-point Likert scale from highly confident (1) to not at all confident (5). Higher scores on this scale indicate a that participants perceived that they would experience more difficulty but would be able to cope with difficulty overcoming perceived barriers. On average, students indicated the most confidence in overcoming finding, "work that provides adequate health care benefits" ( $M = 2.2$ ,  $SD = 1.2$ ), and in "overcoming discrimination due to ethnicity" ( $M = 2.2$ ,  $SD = 1.5$ ). On average, students indicate the least amount of confidence in their ability to overcome barriers associated with, "lack of support



from friends” ( $M = 2.6$ ,  $SD = 1.5$ ). In this sample, students perceived significant barriers, but were moderately confident they could overcome them. Item mean and standard deviations for the sample are presented in Table 1.

**Table 1 Item Means and Standard Deviations for Perceived Barriers & Coping Scales**

	<i>M</i>	<i>SD</i>
<b>Barriers to Career and Academic Development (10 items)<sup>a</sup></b>		
<i>In my future career I will probably...</i>		
...be treated differently because of my ethnicity.	3.7	1.5
...have a harder time getting hired than people of a different ethnicity.	3.5	1.4
...lack support from friends to pursue educational goals.	3.8	1.2
...my disability is currently a barrier to my educational goals.	3.6	1.4
People's attitudes about my disability are currently a barrier to my educational goals.	4.0	1.2
Lack of support from my <i>significant other</i> to pursue education is a barrier to my goals.	3.9	1.2
My desire to have children is currently a barrier to my educational goals.	3.6	1.4
Relationship concerns are currently a barrier to my educational goals.	3.8	1.3
Having to work while I go to school is currently a barrier to my educational goals.	3.1	1.6
Lack of role models or mentors is currently a barrier to my educational goals.	3.5	1.5
<b>Coping Efficacy (16 items)<sup>b</sup></b>		
<i>I can overcome...</i>		
...discrimination due to my ethnicity.	2.2	1.5
...discrimination due to my disability.	2.4	1.5
...negative comments about my ethnicity (insults, jokes).	2.4	1.5
...negative comments about my disability (insults, jokes).	2.4	1.5
...difficulty finding work that provides adequate health care benefits.	2.2	1.2
...family problems...	2.4	1.4
...not being smart enough...	2.3	1.4
...negative family attitudes about college...	2.3	1.4
...not being prepared enough...	2.5	1.5
...not knowing how to study well...	2.4	1.4
...not having enough confidence...	2.4	1.4
...lack of support from friends...	2.6	1.5
...people's attitudes about my disability...	2.4	1.5
...my desire to have children...	2.5	1.5
...relationship concerns...	2.5	1.4
...lack of role models or mentors...	2.4	1.4

Note a: Five-point Likert scale from strongly agree (1) to strongly disagree (5)

Note b: Five-point Likert scale from highly confident (1) to not at all confident (5)

## Factor Structure

Principal axis factoring (PAF) using direct oblimin rotation was conducted to explore the dimensionality of the instrument. Individual items with extraction values less than 0.20 were removed from the analysis (Byrne, 2001). A conservative approach was used to generate the factor solution, including only factors with eigenvalues greater than two (Byrne, 2001). The variance accounted for by the solution, the variance accounted for by each individual factor, and the interpretability of the factors were all evaluated to determine the initial plausibility of the factor structure. To further confirm the factor structure a parallel analysis was used (Ladesma & Valero-Mora, 2007).

The PFA of the instrument suggested that a two-factor solution best explained the data. The variance explained by the solution was 50.1%, and the two factors individually accounted for 31.9%, 18.2%, respectively. In addition, parallel analysis indicated that a two-factor solution best represented the data when eigenvalues from the target data set were compared to eigenvalues from randomly generated data: (a) Factor 1: 8.30 vs. 2.58; and (b) Factor 2: 4.72 vs. 2.31. Using the pattern matrix for interpretation, ten observed variables loaded on the first Factor (values ranged from .53 to .82); sixteen observed variables loaded on the second Factor (values ranged from .55 to .84). The correlation between the two factors was -.12. Factor loading for each item are provided in Table 2.

**Table 2 Item Weights – Principal Axis Factoring<sup>a</sup>**

	Coping	Barriers
<b>Barriers to Academic and Career Development</b>		
<i>In my future career I will probably...</i>		
...be treated differently because of my ethnicity.	-.001	.496
...have a harder time getting hired than people of a different ethnicity.	.000	.524
...lack support from friends to pursue educational goals.	-.067	.663
...my disability is currently a barrier to my educational goals.	-.067	.328
<b>Barriers to Academic and Career Development (continued)</b>		
People's attitudes about my disability are currently a barrier to my educational goals.	-.090	.637
Lack of support from my <i>significant other</i> to pursue education is a barrier to my goals.	-.011	.702
My desire to have children is currently a barrier to my educational goals.	.156	.811
Relationship concerns are currently a barrier to my educational goals.	.175	.817
Having to work while I go to school is currently a barrier to my educational goals.	.036	.602
Lack of role models or mentors is currently a barrier to my educational goals.	-.038	.663

Coping Efficacy		
<i>I can overcome...</i>		
...discrimination due to my ethnicity.	.836	.073
...discrimination due to my disability.	.648	-.157
...negative comments about my ethnicity (insults, jokes).	.576	-.301
...negative comments about my disability (insults, jokes).	.647	-.165
...difficulty finding work that provides adequate health care benefits.	.554	.068
...family problems...	.581	.057
...not being smart enough...	.724	.086
...negative family attitudes about college...	.726	-.094
...not being prepared enough...	.751	.064
...not knowing how to study well...	.627	.135
...not having enough confidence...	.661	-.129
...lack of support from friends...	.731	-.030
...people's attitudes about my disability...	.759	-.094
...my desire to have children...	.669	.107
...relationship concerns...	.691	-.056
...lack of role models or mentors...	.765	.141

Note a. Rotation Method: Oblimin with Kaiser Normalization.

### Internal Consistency Reliability

For the 10-item Barriers subscale, internal reliability was high ( $\alpha = 0.87$ ). For the 16-item Coping Efficacy subscale reliability was very high ( $\alpha = 0.93$ ). Overall reliability for the 26-item instrument was high ( $\alpha = 0.87$ ). Coefficients indicated a high degree of internal consistency, indicating that the measure is accurately gauging the identified theoretical constructs.

## Discussion

The purpose of this study was to explore how students with HID from CLD backgrounds perceived barriers and coping in the process of academic and career development. We grounded our work in social cognitive career theory to better understand how personal background variables (e.g. disability status, ethnicity) and personal cognitive variables (coping efficacy) influence perceptions of academic and career development in social context. We sought to expand the conceptualization of self-determination to focus attention on the social construction of efficacy beliefs. In so doing, our goal is to move the disability-transition research toward a view that situates the development of efficacy beliefs (self-determination) and the enactment of those beliefs in social context. In the sections that follow we discuss the of our findings, the importance of our results, limitations, and implications for research and practice.

The research question addressed by this study was: Is there an underlying theoretical structure that relates ethnicity, disability, perceived barriers, and coping- efficacy in the process of academic and career development for students with HID from CLD backgrounds? Our findings suggest that salient markers of identity (e.g., ethnicity and disability) theoretically relate to the perception of barriers and the social construction of coping-efficacy beliefs and that social cognitive career theory is a useful theoretical framework for understanding the process of career and academic development for students with HID from CLD backgrounds.

Leake (2012) notes that self-determination beliefs and actions are situated in and informed by social context. We found that students with HID from CLD backgrounds perceived that the opportunity structure of the social environment presented barriers related to discrimination based on their ethnicity and disability status. More specifically, on average, participants perceived that people's attitudes about their disability were a significant barrier to their educational goals. Participants also noted that they believed that they would be treated differently because of their ethnicity and they would have a harder time getting hired than people of a different ethnicity. They viewed these as serious barriers to achieving their academic and career goals. Although participants were moderately sure that they could cope with these barriers, these findings are important because they demonstrate the theoretical connection between identity, coping-efficacy, and the social environment for students with HID from CLD backgrounds. Further, these results support and extend the work of Lindsay (2011) and Lindstrom et al. (2013) that suggest that barriers such as discrimination in the labor market impede the career development of transition age youth with disabilities.

Supportive social relationships have been found to be predictive of improved post-school educational and employment outcomes for students with disabilities (Test et al., 2009). Using cross-cultural research as an analytic lens, Leake (2012) persuasively argued that self-determination occurs in social context and that interdependent social relationships produce social capital that is required for self-determination. Our findings show that concerns about relational supports and perceived barriers to the attainment of educational goals occur in social context. In addition, the perceptions of relational barriers were conceptually connected to coping efficacy. In other words, if significant barriers were perceived due to the lack of relational support then individuals had corresponding lower levels of coping efficacy. This finding supports the notion that interdependent social relationships yield the social capital needed for self-determination and that in the absence of social capital self-determination may be diminished. Consistent with the ideas of interdependent social relationships and social capital, we also found that participants perceived that the lack of role models/mentors posed barriers to the attainment of educational goals and that coping with this barrier was thought to be moderately difficult.

## Limitations

Our results demonstrate that social cognitive career theory is a useful theoretical

framework for understanding how students with HID from CLD backgrounds view themselves in relation to the social environment in the process of academic and career development. Although our findings provide evidence for the social construction of perceived barriers and coping-efficacy beliefs in the context of school-to-community transition, consideration should be given to the limitations of our work. First, we recognize that our sample was chosen purposefully and was relatively small in size. There is much debate in the methodological literature concerning adequacy of sample size when using EFA (Beavers et al., 2013). The primary issue raised is that small sample sizes invite sampling error that can undermine the stability of the factor solutions and compromise the validity of results (Beavers et al., 2013). However, given that the purpose of this work was to explore the theoretical structure among markers of identity and coping-efficacy we believe that the sample selected illuminates the complex theoretical structure that was observed. We encourage inquiry in subsequent studies that utilize the measure that we have developed to draw on larger samples whenever practically possible.

The use of EFA as an analytic tool presents limitations. The goal of EFA is to explore an underlying factor structure and the relationship between theoretically related variables. This approach requires researchers to make subjective methodological decisions concerning the grouping of items (in this case items on a measure) into statistically and theoretically meaningful categories. To address this issue we took a conservative approach to generating a factor solution that included only factors with eigenvalues greater than two (Byrne, 2001). Although our approach was inline with best practices, there is the possibility that decisions that were made using EFA were unintentionally influenced by our biases. However the two-factor solution that was generated mapped onto the barriers and coping efficacy constructs specified in the social cognitive career theory literature with high levels of statistical reliability. This leads us to believe that the methods selected were appropriate given the theoretical context. The next section discusses the results and implications and is organized around our research question.

### **Directions for Future Research**

Although our findings suggest that social cognitive career theory is a sound theoretical structure for understanding perceived barrier and coping efficacy in social context, this line of inquiry should be extended in a number of important ways. First, given the phenomenological nature of the perception of barriers and coping, future research should take a mixed methods approach to the study of social cognitive career theory involving students with HID from CLD backgrounds. For example, through the use of measures such as the one developed in this study quantitative data could be generated to further specify how barriers are perceived by groups of students with HID from different ethnic backgrounds (e.g., white, African American, Latino), and or different socioeconomic backgrounds or places (e.g., urban, rural, suburban). In depth grounded theory work should also be conducted through the use of qualitative methods to gather rich data to reveal how social cognitive career theory

relates to the lived experiences of students with HID from CLD backgrounds. Coupled with these approaches, well planned longitudinal studies tying perceptions of barriers and coping-efficacy with long-term academic and career outcomes are warranted. The combination of both qualitative and quantitative inquiry has the potential to illuminate the complex processes of academic and career development for this population of students.

Practically our findings suggest that a measure such as the one developed in this study, once further refined through Confirmatory Factor Analytic procedures with larger sample could be used by teachers and vocational counselors to better support students in the process of transition from school to work and higher education.

## Conclusions

Transition involves a multi-dimensional planning process; one component of this process should be to identify barriers to successful academic and career development. Another component should be to identify how these barriers present themselves in social context and how students cope with such barriers. In this study, we demonstrated that these two dimensions, while related, are distinct. A strong two-factor structure emerged from our analyses, and this factor structure is well aligned to research related to the perception of barriers and coping efficacy in the process of career and academic development (Lent et al., 1999). We further demonstrated these dimensions can be measured among transition age students with HID from CLD backgrounds. We believe that the resulting information can be used to expand theoretical conceptualizations of self-determination and possibly facilitate more effective transition planning. Each subscale in the instrument had high internal reliability, suggesting the items within each subscale were highly theoretically related. In addition, overall reliability was high enough to suggest the instrument might be used for decision-making purposes, such as those in the transition assessment process.

We strongly believe that both researchers and practitioners require an instrument like the one developed here, to better align goals with student needs, and eventually lead to improved employment and educational outcomes for students with HID from CLD backgrounds.

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